

storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

dividing said key range containing said data into a plurality of divided key ranges, when it is necessary to divide said key range containing said data; and

b1 defining a correspondence between the divided key ranges and said plurality of data storage areas.

41. A database management method according to claim 40, further comprising the step of:

defining a correspondence of at least one of said divided key ranges to a data storage area whose correspondence with a key range is not defined.

42. A database management method according to claim 41, further comprising the step of:

storing the data corresponding to said at least one divided key range to the data storage area whose correspondence with said one divided key range is defined.

43. A database management method according to claim 41, further comprising the step of:

deleting data corresponding to said divided key range from said data storage area corresponding to the key range necessary to be divided.

44. A database management method comprising the steps of:

b1 defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

dividing said key range containing said data into a plurality of divided key ranges, when a request is inputted to divide said key range containing said data; and

defining a correspondence between the divided key ranges and said plurality of storage areas.

45. A database management method according to claim 44, further comprising the step of:

defining a correspondence of at least one of said divided key ranges to a data storage area whose correspondence with a key range is not defined.

46. A database management method according to claim 45, further comprising the step of:

storing the data corresponding to said at least one divided key range to the data storage area whose correspondence with said one divided key range is defined.

47. A database management method according to claim 45 further comprising the step of:

b1 deleting data corresponding to said divided key range from said data storage area correspondence to the key range to which the request is inputted to divide.

48. A database management method comprising the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

dividing at least one of said plurality of key ranges, when necessary to divide; and

defining a correspondence between the divided key ranges and said plurality of data storage areas.

49. A database management method according to claim 48, further comprising the step of:

defining a correspondence of at least one of said divided key ranges to a data storage area whose correspondence with a key range is not defined.

50. A database management method comprising the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

b1 dividing at least one of said plurality of key ranges, when a request is inputted to divide; and

defining a correspondence between the divided key ranges and said plurality of data storage areas.

51. A database management method according to claim 50, further comprising the step of:

defining a correspondence of at least one of said divided key ranges to a data storage area whose correspondence with a key range is not defined.

52. A database management method comprising the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

storing data in a data storage area which  
corresponding to a key range containing said data, when  
storing said data in a database;

including an information indicating an additional  
key range into a received request, when said request is  
received to add a key range; and

defining a correspondence between said additional  
key range and a data storage area.

53. A database management method comprising the steps  
of:

defining a correspondence between a plurality of key  
ranges and a plurality of data storage areas in a storage  
device;

storing data in a data storage area which  
corresponds to a key range containing said data, when storing  
said data in a database;

including into a request, an information indicating  
a first key range which is to be divided, an information  
indicating a dividing value for dividing said first key range,  
a first and a second data storage areas for storing data  
corresponding to the divided first key range, when said  
request is received to divide a key range;

dividing said first key range, into a second key  
range which covers the range not greater than said dividing

value, and into a third key range which covers the range not smaller than said dividing value; and

defining a correspondence between said second key range and said first data storage area, and between said third key range and said second data storage area.

54. A database management method comprising the steps of:

b1 defining a correspondence between a plurality of key ranges and a plurality of key ranges and a plurality of data storage means in a storage device;

storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

including an information indicating a plurality of key ranges into a received request, when said request is received to merge key ranges;

merging said plurality of key ranges into a merged key range; and

defining a correspondence between said merged key range and a data storage area.

55. A database management method comprising the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

including an information indicating a key range to be deleted into a received request, when said request is received to delete a key range; and

b1 deleting the information defining the correspondence between the data storage area corresponding to the key range to be deleted and said key range to be deleted.

56. A database management method comprising the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

including into a request, an information indicating a first key range which is to be divided, an information indicating a dividing value for dividing said first key range, a first and a second data storage areas for storing data corresponding to the divided first key range, when said request is received to divide a key range;

dividing said first key range, into a second key range which covers the range not greater than said dividing value, and into a third key range which covers the range not smaller than said dividing value; and

defining a correspondence between said second key range and said first data storage area, and between said third key range and said second data storage area.

b1  
57. A database management method comprising the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

including an information indicating a plurality of key ranges into a received request, when said request is received to merge key ranges;

merging said plurality of key ranges into a merged key range; and

defining a correspondence between said merged key range and a data storage area.

58. A database management method comprising the steps of:



defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

including an information indicating a key range to be deleted into a received request, when said request is received to delete a key range; and

b1 deleting the information defining the correspondence between the data storage area correspondence to the key range to be deleted and said key range to be deleted.

59. A database management system comprising:

means for defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

means for storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

means for dividing said key range containing said data into a plurality of divided key ranges, when it is necessary to divide said key range containing said data; and

means for defining a correspondence between the divided key ranges and said plurality of data storage areas.

60. A database management system comprising:

means for defining a correspondence between a plurality of key ranges and a plurality of data storage in a storage device;

means for storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

b1 means for dividing said key range containing said data in a plurality of divided key ranges, when a request is inputted to divide said key range containing said data; and

means for defining a correspondence between the divided key ranges and said plurality of data storage areas.

61. A database management system comprising:

means for defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

means for dividing at least one of said plurality of key ranges, when necessary to divide; and

means for defining a correspondence between the divided key ranges and said plurality of data storage areas.

62. A database management system comprising:

means for defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

means for dividing at least one of said plurality of key ranges, when a request is inputted to divide; and

means for defining a correspondence between the divided key ranges and said plurality of data storage areas.

63. A database management system comprising:

means for defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

b1 means for storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

means for including an information indicating an additional key range into a received request, when said request is received to add a key range; and

means for defining a correspondence between said additional key range and a data storage area.

64. A database management system comprising:

means for defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

means for storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

means for including into a request, an information indicating a first key range which is to be divided, an information indicating a dividing value for dividing said first key range, a first and a second data storage areas for storing data corresponding to the dividing first key range, when said request is received to divide a key range;

b' means for dividing said first key range, into a second key range which covers the range not greater than said dividing value, and into a third key range which covers the range not smaller than said dividing value; and

means for defining a correspondence between said second key range and said first data storage area, and between said third key range and said second data storage area.

65. A database management system comprising:

means for defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

means for storing in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

means for including an information indicting a key range to be deleted into a received request, when said request is received to delete key range; and

means for deleting the information defining the correspondence between the data storage area corresponding to the key range to be deleted and said key range to be deleted.

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1.126

~~66~~  
67.

A database management system comprising:

means for defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

b1  
means for including into a request, an information indicating a first key range which is to be divided, an information indicating a dividing value for dividing said first key range, a first and a second data storage areas for storing data corresponding to the divided first key range, when said request is received to divide a key range;

means for dividing said first key range, into a second key range which covers the range not greater than said dividing value, and into a third key range which covers the range not smaller than said dividing value; and

means for defining a correspondence between said second key range and said first data storage area, and between said third key range and said second data storage area.

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68.

A database management system comprising:

means for defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

means for including an information indicating a plurality of key ranges into a received request, when said request is received to merge key ranges;

merging said plurality of key ranges into a merged key range; and

means for defining a correspondence between said merged key range and a data storage area.

*Rule 1.126*  
*b1*  
*68*  
~~69~~. A database management system comprising:

means for defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

means for including an information indicating a key range to be deleted into a received request, when said request is received to delete a key range; and

means for deleting the information defining the correspondence between the data storage area correspondence to the key range to be deleted and said key range to be deleted.

*69*  
~~70~~. A computer readable storage medium storing a database management program, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

dividing said key range containing said data into a plurality of divided key ranges, when it is necessary to divide said key range containing said data; and

defining a correspondence between the divided key ranges and said plurality of data storage areas.

*b1  
Rule  
1.126*  
*70* 1. A computer readable storage medium storing a database management program, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

dividing said key range containing said data into a plurality of divided key ranges, when a request is inputted to divide said key range containing said data; and

defining a correspondence between the divided key ranges and said plurality of data storage areas.

*21*  
~~22~~. A computer readable storage medium storing a database management program, said program when executed causes a computer to perform the steps of:

*Rule 1.126*  
*b1*  
defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

dividing at least one of said plurality of key ranges, when necessary to divide; and

defining a correspondence between the divided key ranges and said plurality of data storage areas.

*22*  
~~23~~. A computer readable storage medium storing a database management program, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

dividing at least one of said plurality of key ranges, when a request is inputted to divide; and

defining a correspondence between the divided key ranges and said plurality of data storage areas.



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74. A computer readable storage medium storing a database management program, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

including an information indicating an additional key range into a received request, when said request is received to add a key range; and

defining a correspondence between said additional key range and a data storage area.

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75. A computer readable storage medium storing a database management program, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

storage data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

including into a request, an information indicating a first key range which is to be divided, an information indicating a dividing value for dividing said first key range, a first and a second data storage areas for storing data corresponding to the divided first key range, when said request is received to divide a key range;

dividing said first key range, into a second key range which covers the range not greater than said dividing value, and into a third key range which covers the range not smaller than said dividing value; and

defining a correspondence between said second key range and said first data storage area, and between said third key range and said second data storage area.

76. A computer readable storage medium storing a database management program, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

storing data in data storage area which corresponds to a key range containing said data, when storing said data in a database;

including an information indicating a plurality of key ranges into received request, when said request is received to merge key ranges;

merging said plurality of key ranges into a merged key range; and

defining a correspondence between said merged key range and a data storage area.

*Rule 1.12(b)*  
*76*  
77. A computer readable storage medium storing a database management program, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

storing data in a data storage area which corresponds to a key range containing said data, when storing request is received to delete a key range; and

deleting the information defining the correspondence between the data storage area corresponding to the key range to be deleted and said key range to be deleted.

*78*  
78. A computer readable storage medium storing a database management program, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

including into a request, an information indicating a first key range which is to be divided, an information indicting a dividing value for dividing said first key range, a first and a second data storage areas for storing data corresponding to the divided first key range, when said request is received to divide a key range;

dividing said first key range, into a second key range which covers the range not greater than said dividing value, and into a third key range which covers the range not smaller than said dividing value; and

defining a correspondence between said second key range and said first data storage area, and between said third key range and said second data storage area.

78  
79. A computer readable storage medium storing a database management program, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

including an information indicating a plurality of key ranges into a received request, when said request is received to merge key ranges;

merging said plurality of key ranges into a merged key range; and

defining a correspondence between said merged key range and a data storage area.

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Rule  
1.126  
79  
80. A computer readable storage medium storing a database management program, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

including an information indicating a key range to be deleted into a received request, when said request is received to delete a key range; and

deleting the information defining the correspondence between the data storage area corresponding to the key range to be deleted and said key range to be deleted.

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81. A database management program stored on a computer readable storage medium, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

dividing said key range containing said data into a plurality of divided key ranges, when it is necessary to divide said key range containing said data; and

defining a correspondence between the divided key ranges and said plurality of data storage areas.

b1  
Rule  
1, 126  
41/ 2. A database management program stored on a computer readable storage medium, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

dividing said key range containing said data into a plurality of divided key ranges, when a request is inputted to divide said key range containing said data; and

defining a correspondence between the divided key ranges and said plurality of data storage areas.

*82*  
~~83~~. A database management program stored on a computer readable storage medium, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

*b1  
Rule  
1, 126*  
dividing at least one of said plurality of key ranges, when necessary to divide; and

defining a correspondence between the divided key ranges and said plurality of data storage areas.

*83*  
~~84~~. A database management program stored on a computer readable storage medium, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

dividing at least one of said plurality of key ranges, when a request is inputted to divide; and

defining a correspondence between the divided key ranges and said plurality of data storage areas.

~~45~~ 85. A database management program stored on a computer readable storage medium, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

including an information indicating an additional key range into a received request, when said request is received to add a key range; and

defining a correspondence between said additional key range and a data storage area.

*b1  
Rule  
1.126*  
~~45~~ 86. A database management program stored on a computer readable storage medium, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;



including into a request, an information indicating a first key range which is to be divided, an information indicating a dividing value for dividing said first key range, a first and a second data storage areas for storing data corresponding to the divided first key range, when said request is received to divide a key range;

dividing said first key range, into a second key range which covers the range not greater than said dividing value, and into a third key range which covers the range not smaller than said dividing value; and

defining a correspondence between said second key range and said first data storage area, and between said third key range and said second data storage area.

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*Rule 1.126*  
*60*  
87. A database management program stored on a computer readable storage medium, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

including an information indicating a plurality of key ranges into a received request, when said request is received to merge key ranges;

merging said plurality of key ranges into a merged key range; and

defining a correspondence between said merged key range and a data storage area.

b1 47  
88. A database management program stored on a computer readable storage medium, said program when executed causes a computer to perform the steps of:

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defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

including an information indicting a key range to be deleted into a received request, when said request is received to delete a key range; and

deleting the information defining the correspondence between the data storage area corresponding to the key range to be deleted and said key range to be deleted.

~~88~~ 89. A database management program stored on a computer readable storage medium, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

including into a request, an information indicating a first key range which is to be divided, an information indicating a dividing value for dividing said first key range, a first and a second data storage areas for storing data corresponding to the divided first key range, when said request is received to divide a key range;

dividing said first key range, into a second key range which covers the range not greater than said dividing value, and into a third key range which covers the range not smaller than said dividing value; and

defining a correspondence between said second key range and said first data storage area, and between said third key range and said second data storage area.

~~89~~ 90. A database management program stored on a computer readable storage medium, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

including an information indicating a plurality of key ranges into a received request when said request is received to merge key ranges;

merging said plurality of key ranges into a merged key range; and

defining a correspondence between said merged key range and a data storage area.

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1.126  
91. A database management program stored on a computer readable storage medium, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

including an information indicating a key range to be deleted into a received request, when said request is received to delete a key range; and

deleting the information defining the correspondence between the data storage area corresponding to the key range to be deleted and said key range to be deleted.--